Due to the sheer mass of the vehicle and nature of materials transported, heavy vehicle crashes tend to be more serious, resulting in the loss of human life and high cost damages.

Over 17% of the 2012 Australian road toll can be attributed to crashes involving heavy vehicles.

THE FACTS

- Transport is a crucial component of the Australian economy, directly accounting for approximately 5% of Gross Domestic Product, and forming a key input to almost all other sectors of the economy, including the export and import sectors. Efficient land transportation has long been vital for Australia’s economic growth, international competitiveness and social wellbeing.

- Heavy goods vehicles are crucial to the transport sector.

- Rigid trucks and articulated trucks comprised 3.2% of registered vehicles in Australia in 2012, yet these vehicles account for 7.1% of the total vehicle kilometres travelled in Australia.

What is a heavy goods vehicle?

- A heavy goods vehicle is a vehicle with a gross vehicle mass of 4.5 tonnes or greater, which is used to transport goods on the road.

- There are two categories of trucks generally referred to as heavy vehicles:
  - rigid trucks (eg. tow trucks and garbage trucks) where the tray forms part of the truck body; and
  - articulated trucks (eg. semi-trailers) where there is a prime mover or a rigid truck towing one or more trailers. Articulated trucks can be further broken down into B-doubles (which are a semi-trailer with a second smaller trailer between the prime mover and main trailer) and road trains (which are longer than 19 metres and generally have three or more trailers).

Heavy vehicle crash involvement

A State perspective

- In Queensland, during the 12 months to the end of June 2012, 53 people died as a result of heavy goods vehicle crashes (involving heavy rigid trucks and articulated trucks). This accounts for 19% of the state road toll for that period.

A National perspective

- In Australia, during the 12 months to the end of June 2012, 225 people died from 200 crashes involving heavy trucks or buses. This accounts for 17.6% of the annual road toll. These included:
  - 124 deaths from 112 crashes involving articulated trucks
  - 86 deaths from 73 crashes involving heavy rigid trucks

- In a report from a leading truck insurance company it was found that during 2011, 461 national truck crash incidents accounted for AUD$54.7m in claims payments (average overall cost per major crash AUD$118,600). Of these crashes the following was found:
  - Inappropriate speed for the prevailing conditions accounted for 25.4% of major truck crashes (compared with 31.8% in 2009).
  - Fatigue was found to be the predominant cause of 11.9% of large truck crash losses in 2011. This is a much improved outcome since the same research conducted in 2003 which found fatigue to be the primary cause in over 26% of losses. This change occurred after the introduction of the National Model Legislation for Heavy Vehicle Driver Fatigue Reform, implemented in September 2008, fewer incidents have been attributed to fatigue.
  - 70% of multiple vehicle crashes involving a truck in 2011 were caused by the truck driver. However, 100% of multiple vehicle
crashes involving a truck which led to a fatality was caused by the driver of the other vehicle. Over 40% of these crashes occurred on highways.

What is being done to improve heavy vehicle safety?

- Historic legislation was considered in the Queensland Parliament in August 2012, with the passing of the Heavy Vehicle National Law Bill. This was a significant milestone in the establishment of a National Heavy Vehicle Regulator and has paved the way for the introduction of a single, nationally uniform set of laws to govern the operation of heavy vehicles in Australia. The passage of the legislation will enable the National Heavy Vehicle Regulator (NHVR) to commence operating with a limited scope of work from January 2013. Over the coming months, all Australian States and Territories will begin introducing legislation to their Parliaments to adopt the national law, as passed in Queensland. It is expected that the Regulator will assume full responsibility for the regulation of all heavy vehicles across Australia from the second half of 2013.
- A number of studies are underway to determine, in greater detail, the causes of heavy vehicle crashes.
- The heavy vehicle industry is subject to a large number of laws and regulations which are designed to improve safety. These include fatigue management programs such as log books and chain of responsibility laws (in which managers, packers and schedulers can all be charged for applying pressure on a driver to exceed safe driving hours or drive in an unsafe manner).
- A number of policies and strategies have been implemented to enhance safety within the heavy vehicle industry; however, the impact of these on individual drivers’ behaviour remains unknown. Heavy vehicle drivers have a key responsibility in achieving safety outcomes. Current research aims to gain a more comprehensive understanding of heavy vehicle driving culture in order to implement behavioural change strategies that result in real change in drivers’ attitudes towards safety.
- There have been a number of technological advancements in the industry, such as vehicles which are designed to recognise fatigue and alert the driver, lane positioning monitors, and systems to prevent the vehicle from following too closely. Despite vast improvements in heavy vehicle safety, there will remain the problem of how others drive around heavy vehicles.

Challenges for heavy vehicle safety improvement

- Drivers possess a high level of autonomy regarding safety behaviours.
- Truck drivers are generally reticent to participate in research projects that focus on their driving behaviours, thus creating a challenge to understand and address safety issues in the heavy vehicle industry.
- Current research projects which are exploring the culture, attitudes, beliefs and values of heavy vehicle drivers are highly significant. By understanding safety from the perspective of the driver and working with truck drivers and their employers, improved safety outcomes can be achieved.
- The driving behaviour of the general public around trucks, and awareness regarding the dangers associated with heavy vehicles present an ongoing challenge.

TIPS FOR STAYING SAFE

It is important to understand how to safely share the road with heavy vehicles:

- Do not crowd, tailgate or cut in front of trucks.
- Always signal your intentions early.
- Be aware of trucks’ blind spots. Trucks have numerous blind spots at the rear and side of the vehicle. If you can’t see a truck’s rear vision mirrors, it is likely the truck driver cannot see you.
- When following a truck:
  - Maintain at least a 4 second following distance to enable the driver to see you outside his rear blind spot. You may need to allow even greater distance depending on speed and weather conditions.
  - Beware of air turbulence behind heavy vehicles and when you pass the front of them.
  - If slowed travelling behind a heavy vehicle, be patient and wait for safe space before overtaking.
- When overtaking or travelling in front of a truck:
  - Be aware of the difficulties of slowing a truck and allow appropriate braking distances. It takes a heavy vehicle twice the time and room to stop as a car.
  - When moving into a lane in front of a truck, allow 10 car lengths before changing lanes, or ensure you can see both the truck’s headlights in your rear-view mirror before pulling back in front of the truck or bus. This provides adequate space for the truck driver to slow or stop safely if necessary.
  - Place wiper blades on high when passing or meeting a heavy vehicle in rain or snow.
  - Because of their size, heavy vehicles are not always able to turn from within their own lane. Always watch for signals indicating that a truck may be turning and ensure you leave plenty of space for him to do so.
CARRS-Q’S WORK IN THE AREA

- The influence of culture on safety in the heavy vehicle industry: The industry and being a ‘truckie’
- An investigation into substance abuse in the heavy trucking industry.
- A review of heavy vehicle insurance data.
- An investigation into the experiences and perceptions of heavy vehicle drivers and train drivers regarding the dangers at railway level crossings.
- Fatigue and beyond: Patterns of and motivations for illicit drug use among long-haul truck drivers.
- Contemporary behavioural influences in an organisation setting and implications for intervention development.
- Identification of barriers to and facilitators for the implementation of occupational road safety initiatives.

FUTURE DIRECTIONS

- Further research is required to better understand the major causes of heavy vehicle crashes. As a large portion of heavy vehicle crashes involve multiple vehicles, attributing cause accurately is often difficult.
- Best practice heavy vehicle safety interventions need to be developed that take into account industry needs, effective policy and legislation, the culture of the industry, and driver attitudes and behaviours.
- Continued improvement of the national and state road network to provide the safest possible environment for heavy and other vehicles sharing the road.
- The development of effective interventions is required to address fatigue and the use of appropriate speed (two major causes of heavy vehicle crashes), and illicit drug use.
- There is a lack of information provided to the public about how to drive safely around trucks. Drivers’ education classes, licence tests and education interventions targeting the general public need to better address safe driving practices around heavy vehicles.

This fact sheet is a community service provided by CARRS-Q. Not all of the research included in this fact sheet was provided by CARRS-Q. For research authors, please see the reference list below.

REFERENCES


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